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THREE NEW SPECIES OF PSILOCORSIS CLEMENS
(LEPIDOPTERA: OECOPHORIDAE) FROM
SOUTHERN ARIZONA

By RONALD W. HODGES¹

John G. Franclemont and I collected Lepidoptera in southeastern Arizona from June 29 through November 11, 1959. Most of the collecting was done in Madera Canyon, a north-facing canyon, in the Santa Rita Mountains, Santa Cruz County. Most of the material was taken at an elevation of 4880 feet in the chaparral zone which is intermediate in character between the desert grassland zone below and the pine zone above. Distinctive trees and shrubs of the chaparral zone are scrub oaks (*Quercus* spp.), sumacs (*Rhus* spp.), manzanitas (*Arctostaphylos* spp.), sycamores (*Platanus* spp.), catclaw (*Acacia greggii*), and junipers (*Juniperus* spp.). A wide variety of herbaceous plants appears during and after the rainy periods. As a result of the variety of plants present and the lack of a pure stand of any one species, there is a larger number of species of Lepidoptera present in this zone than in either of the adjacent ones. Another factor which augments the number of species of Lepidoptera found in the area is that during a rainy summer, when the streams are flowing, there is a tendency for moths to use the cuts of the major waterways as flyways. Therefore, many species of moths from the pine and grassland zones may be

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found in the intermediate one.

The summer rains, which began on June 29 in 1959 and continued through September, were much heavier than normal, with a resulting "greening up" of the canyon. Concomitant with the above-average rainfall was a larger number of moths as contrasted with the number present during the summer of 1960 when the rains were below normal (*Teste* J. G. Franclemont).

Approximately 35,000 moths were collected and spread during the 1959 season; of these about 15,000 were Microlepidoptera, with the Gelechiidae and Blastobasidae predominating. I am gradually working up the Gelechioidea, and the material will be divided between the Cornell University Collection and my collection, with the types of new species being placed in the former.

The two species of *Psilocorsis* which we collected appear to be undescribed. Also, Lloyd Martin of the Los Angeles County Museum has allowed me to describe a third species of *Psilocorsis* which he had collected in the Chiricahua Mountains.

Psilocorsis amydra, n. sp.

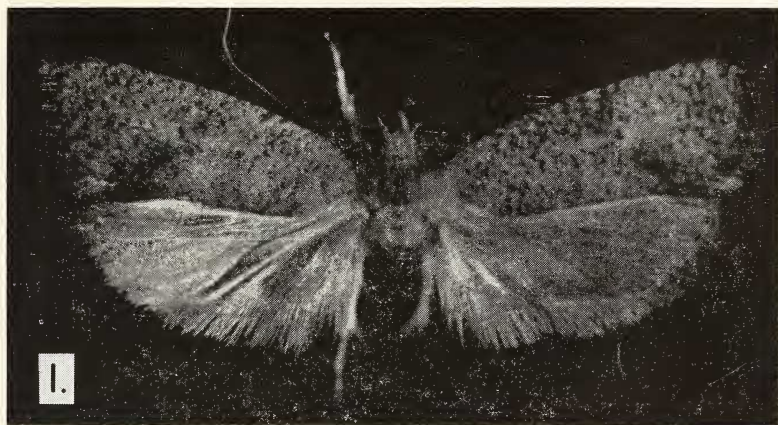
Head dark tan. Labial palpi: second segment light buff on inner surface, a row of black scales on ventral surface, followed outwardly by a row of buff ones, a row of dark (almost black) scales, then a series of tan scales on outer surface; third segment with alternating rows of black and buff scales: black ventrally and laterally, buff dorsally and at ventro-lateral angles; apex buff. Antennae buff on outer surface, black on inner surface, a row of buff scales on scape, and two rows of buff scales on shaft; apex of shaft tan. Thorax fuscous-brown. Forewings (Fig. 1) fuscous-brown with an overlay of blackish scales; a black spot at one-third and another at two-thirds of distance from base to apex on costal margin of discal cell; a fuscous streak from outer edge of discal cell to tornus; and a row of black dots, tending to become linear, along outer margin from apex to dorsal margin beyond tornus. Hindwings fuscous; cilia fuscous at apex, lighter elsewhere. Legs: buff; prothoracic pair with anterior surface of tibiae dark fuscous-brown, anterior

EXPLANATION OF PLATE I

Fig. 1, *Psilocorsis amydra* Hodges, n. sp., type, Madera Canyon, Santa Cruz Co., Arizona. Fig. 2, *P. arguta* Hodges, n. sp., type, Madera Canyon, Santa Cruz Co., Arizona. Fig. 3, *P. cirrhoptera* Hodges, n. sp., Chiricahua Mountains, Arizona.

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PLATE I



surface of first two tarsal segments brown, anterior surface of last three tarsal segments dark fuscous, and last row of scales on fifth tarsal segment buff; mesothoracic pair with same color pattern except that colors are lighter; mesothoracic pair buff with outer tibial spurs fuscous, inner ones buff.

Male genitalia: (Figs. 4 and 4a) R.W.H. slide no. 639.

Female genitalia: (Fig. 7) R. W. H. slide no. 640. Signum with 23 to 27 branches.

Alar expanse: 18–24 mm.

Types: Holotype: female, Madera Canyon, 4880 feet, Santa Rita Mountains, Santa Cruz Co., Arizona, August 6, 1959 (R. W. Hodges), [CU Type No. 3731]. Paratypes: 6 males, 19 females, Madera Canyon, 4880 feet, Santa Rita Mountains, Santa Cruz Co., Arizona, July 9 through August 26, 1959 (R. W. Hodges); one female, Madera Canyon, 5600 feet, Santa Rita Mountains, Santa Cruz Co., Arizona, August 1, 1959 (R. W. Hodges); 5 females, Madera Canyon, 5800 feet, Santa Rita Mountains, Santa Cruz Co., Arizona, July 12 through August 1, 1960 (J. G. Franclemont).

Psilocorsis amydra can be separated from *P. faginella* (Chamb.) by the dark tan head contrasting with the fuscous-brown thorax in *amydra*, whereas the head and thorax of *faginella* are concolorous. The male genitalia of *amydra* have a patch of cornuti along the medial section of the vesica, none at the terminal portion of the vesica as compared with *faginella* which has a terminal cornutus and a medial group of cornuti. The ventro-lateral patches of setae on the genital plate of the female of *amydra* are composed of 15–20 setae, contrasted with five in each patch in *faginella*.

Psilocorsis arguta, n. sp.

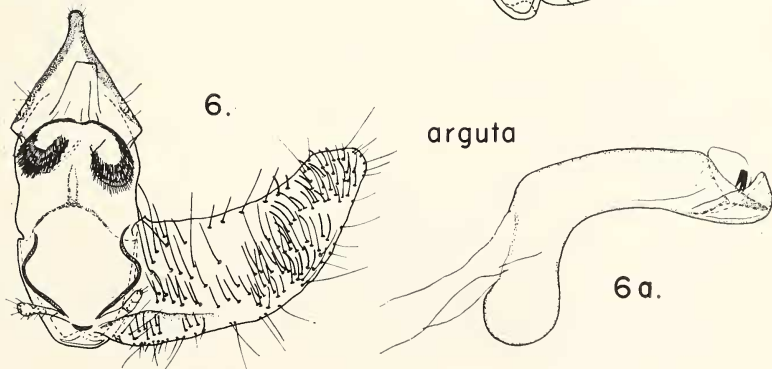
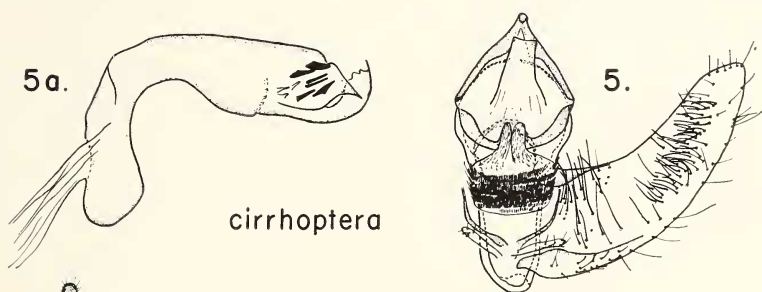
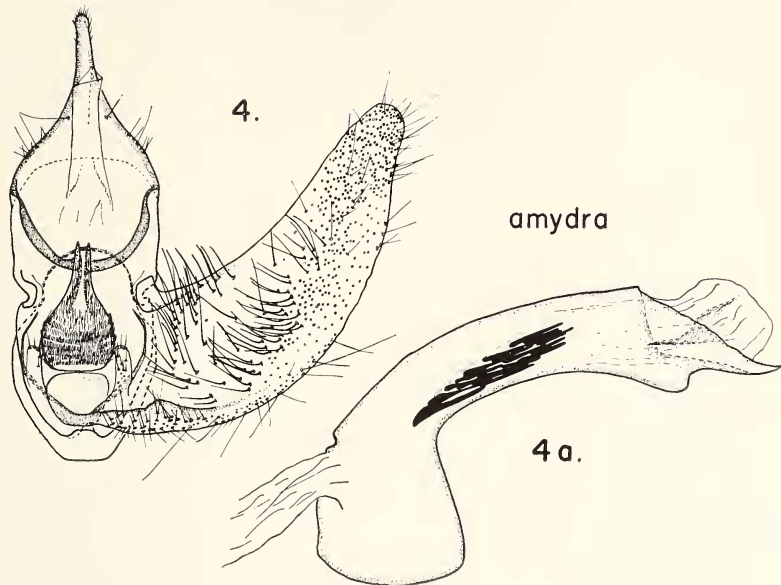
Head and antennae yellow-brown with same color pattern as *P. amydra*. Thorax brown. Forewings (Fig. 2) brown, with several transverse rows of fuscous-brown scales, and a series of terminal black dots from apex to tornus; cilia shining dark fuscous, composed of two scale rows. Hindwings fuscous, with some veins outlined with darker scales; cilia fuscous, darker at apex. Legs

EXPLANATION OF PLATE II

Figs. 4–6, *Psilocorsis*, ventral view of male genitalia. The scale of drawing of the aedeagi is twice that of the genitalia. Fig. 4, *P. amydra* Hodges, n. sp. Fig. 5, *P. cirrhoptera* Hodges, n. sp. Fig. 6, *P. arguta* Hodges, n. sp.

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PLATE II



buff; last three tarsal segments of prothoracic legs fuscous-brown on anterior surface.

Male genitalia: (Figs. 6 and 6a) R.W.H. slide no. 641. The uncus is partially curved in this preparation; thus, it appears foreshortened. Also, the gnathos is tilted, giving the appearance of difference; however, it is nearly the same in outline as the gnathos of *amydra*.

Female genitalia: (Fig. 9) R.W.H. slide no. 642. Signum with 25 to 28 branches.

Alar expanse: 18–22 mm.

Types: Holotype: female, Madera Canyon, 5600 feet, Santa Rita Mountains, Santa Cruz Co., Arizona, August 1, 1959 (R. W. Hodges), [CU Type No. 3730]. Paratypes: 11 males, 16 females, Madera Canyon, 5600 feet, Santa Rita Mountains, Santa Cruz Co., Arizona, August 1 through September 24, 1959; 11 males, 1 female, Madera Canyon, 4880 feet, Santa Rita Mountains, Santa Cruz Co., Arizona, July 6 through August 23, 1959.

Psilocorsis arguta can be separated from *P. faginella* by its slightly yellow-brown forewings; those of *faginella* lack the yellowish tone. The transverse markings of the forewings of *arguta* are narrow and distinct; in *faginella* these markings are wider and indistinct, often covering most of the forewing. The male genitalia have three, small terminal cornuti in *arguta* as contrasted with one, stout terminal cornutus and a series of short, slender cornuti along the medial portion of the vesica of *faginella*. The female genitalia of *arguta* have the portion of the genital plate anterior to the ostium not sharply set off from the posterior portion of the genital plate, whereas this area is well defined in *faginella*; and there are 15–20 setae in each ventro-lateral setal patch on the genital plate of *arguta*, contrasted with 5 setae in each patch on the genital plate of *faginella*.

Psilocorsis cirrhoptera, n. sp.

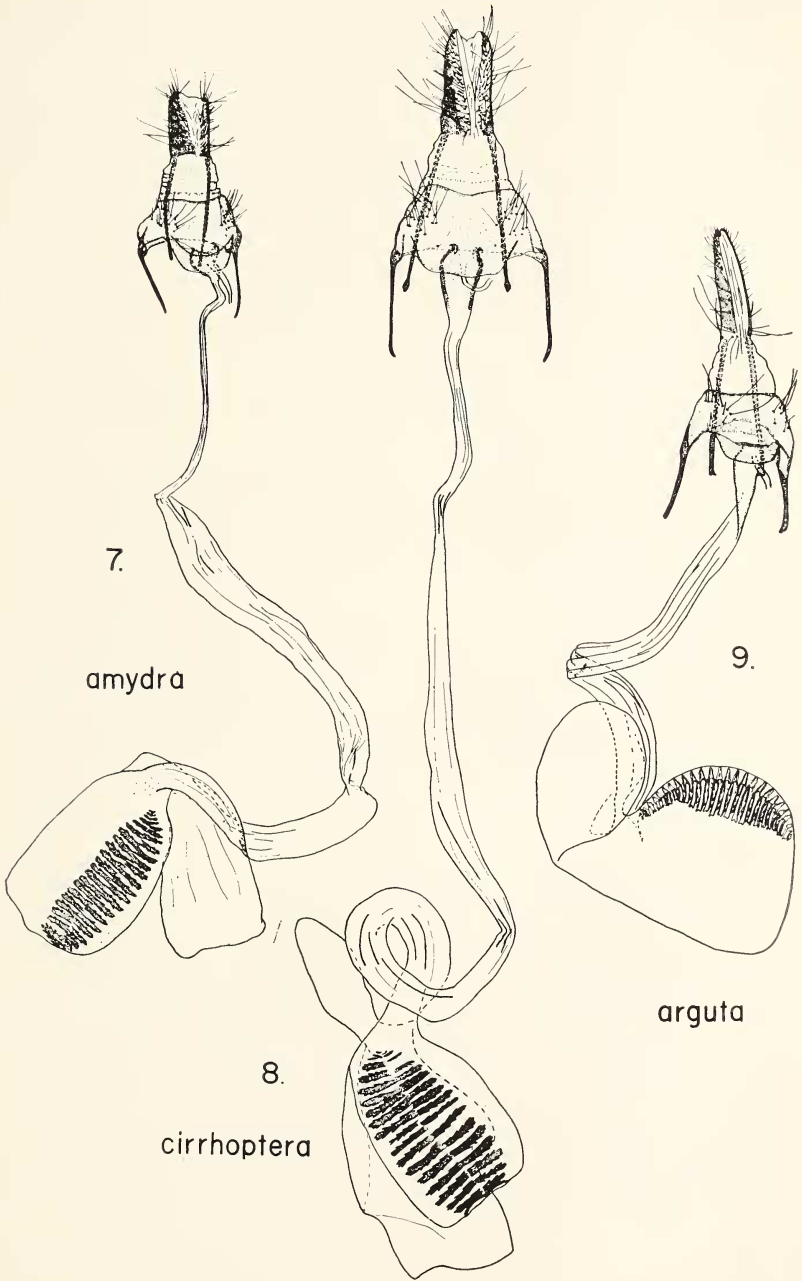
Head, thorax, wings, abdomen, and legs buff. Labial palpi with a ventral black line on second segment (stronger distally), and three black lines on third segment: one on ventral, inner and outer

EXPLANATION OF PLATE III

Figs. 7–9, *Psilocorsis*, ventral view of female genitalia. The scale of *P. cirrhoptera* is twice that of the other species. Fig. 7, *P. amydra* Hodges, n. sp. Fig. 8, *P. cirrhoptera* Hodges, n. sp. Fig. 9, *P. arguta* Hodges, n. sp.

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PLATE III



surfaces; apex buff. Antennae: inner surface of scape with two black lines separated by a whitish one, buff on outer surface; inner surface of shaft with a continuation of black and buff scales, outer surface buff. Legs with distal tarsal segments fuscous on anterior surface. Forewings (Fig. 3) with a series of black scale rows; a black dot on outer margin of discal cell; a row of terminal black dots from apex to tornus; cilia of two scale rows, inner one fuscous from apex to tornus, outer one light fuscous basally, darker distally, both rows becoming buff at tornus. Hindwings buff.

Male genitalia: (Figs. 5 and 5a) R.W.H. slide no. 728. The uncus is curved in the preparation; thus, it appears foreshortened.

Female genitalia: (Fig. 8) R.W.H. slide no. 645. Signum with 19 branches.

Alar expanse: 18–21 mm.

Types: Holotype: female, Upper Camp, Pinery Canyon, Chiricahua Mountains, Cochise Co., Arizona, July 4, 1956 (Lloyd M. Martin, John A. Comstock, William A. Rees), [Los Angeles County Museum]. Paratypes: 11 males, 11 females, Upper Camp, Pinery Canyon, Chiricahua Mountains, Cochise Co., Arizona, July 3–6, 1956 (Lloyd M. Martin, John A. Comstock, William A. Rees); one male, Upper Camp, Pinery Canyon, Chiricahua Mountains, Cochise Co., Arizona, June 27, 1955 (Lloyd Martin).

Psilocorsis cirrhoptera can be separated from *P. faginella* by the former being light buff in color; *faginella* is brown. The transverse markings on the forewings of *cirrhoptera* are narrow and sharp, whereas those of *faginella* tend to be wide and indistinct. The male genitalia of *cirrhoptera* lack a medial patch of cornuti but have a terminal patch of them; contrasted with those of *faginella* which have a medial patch of cornuti and a single terminal one in the vesica.

The males of the new species can be separated from one another by the male genitalia: *amydra* has a medial patch of cornuti in the vesica (Fig. 4a); *cirrhoptera* has six or seven terminal cornuti but lacks the medial ones (Fig. 5a); and *arguta* has two or three terminal cornuti but lacks the medial patch. The females can be separated as follows: *arguta* has the ductus bursae less than three times as long as the signum; the ductus bursae of *amydra* and *cirrhoptera* is more than three times the length of the signum; in *amydra* the portion of the genital plate anterior to the ostium is sharply set off from the rest of the genital plate; and in *cirrhoptera* the portion of the genital plate anterior to the ostium is not sharply set off from the rest of the genital plate.

KEY TO THE SPECIES OF *PSILOCORISIS* BASED PRIMARILY
ON COLORATION²

1. Forewings with a broad, dark transverse fascia at
outer two-thirds *obsoletella* (Zeller)
Forewings without such a fascia 2
2. Forewings with distinct purplish luster; species
dark colored 3
Forewings without purplish luster, or if this is present, it is
only faintly indicated 4
3. Alar expanse 19 mm. *fletcherella* Gibson
Alar expanse 18 mm. or less *caryae* Clarke
4. Alar expanse 18 mm. or more 5
Alar expanse 16 mm. or less *quercicella* Clemens
5. Forewings with dark markings confined to outer discal spot
and a few spots around termen
faginella (Chambers) (part)
Forewings otherwise 6
6. Thorax much darker than head 7
Thorax and head nearly concolorous 8
7. Forewings ochreous, overlaid with reddish fuscous
reflexella Clemens
Forewings fuscous-brown *amydra*, n. sp.
8. Forewings light buff *cirrhoptera*, n. sp.
Forewings yellow-brown or brown 9
9. Forewings yellow-brown *arguta*, n. sp.
Forewings brown *faginella* (Chambers) (part)

Paratypes of the three species, as they are available, will be deposited in the following collections: Cornell University, Los Angeles Co. Museum, United States National Museum, Canadian National Collection, British Museum of Natural History, California Academy of Sciences, J. G. Franclemont, and my personal collection.

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² Adapted from Clarke, Proc. U.S. Natl. Mus. 90, no. 3107, 1941.